REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-22 are pending, of which claims 1, 3, 9, 11, 16, and 18 have been amended. Claims 2, 10, and 17 have been cancelled.

Claim Rejections under 35 U.S.C. §102(b)

Independent claims 1, 9, and 16 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,118,791 issued to Fichou, et al. (hereinafter "Fichou"). With respect to these rejections, as applied to amended claims 1, 9, and 16, the Applicant respectfully traverses.

Claims 1, 9 and 16 Are Not Anticipated by Fichou

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ 1051, 1053 (Fed Cir. 1987).
> **MPEP 2131.**

Independent claims 1, 9, and 16, as currently amended, each contain the following element:

> ... the topology representation including one or more nodes that comprise a hierarchy of arbitrary physical and logical aggregation points *that form a logical representation of the network* and its underlying physical elements...

The Examiner asserts that Fichou teaches the following:

> Fichou further discloses the nodes in the topology representation of the network comprise a hierarchy of arbitrary physical and logical aggregation points that form a logical representation of the network

and its underlying physical elements... (See Office Action, page 3-4).

To support this contention, the Examiner cites to the following sections of Fichou: Fig. 1, switching nodes SW1 to SW4, Fig. 2, topology database, and col. 3, lines 41-45, and col. 3, lines 60-63. However, a careful review of these sections reveals that Fichou does not teach or suggest the claim limitation set forth above (i.e., does not disclose a hierarchy of arbitrary physical and logical aggregation points that form a logical representation of the network and its underlying physical elements.) On the contrary, the system taught in Fichou teaches only a topology representative of physical links in the network. Fichou expressly states, in column 3, lines 60-63, that "[E]ach CP (control point) includes a copy of the Topology Data Base that contains the information about the network. It includes the *network physical configuration* and the line characteristics and status." (Emphasis added) As such, Fichou is limited to providing metering on the physical lines of the system. Thus, Fichou does not teach or suggest a system that provides a topology representation including one or more nodes that comprise a hierarchy of arbitrary physical and logical aggregation points that form a logical representation of the network, as recited in claims 1, 9, and 16.

Applicant's claimed invention provides a topology representation representing both a physical and logical network design, which is not restricted to physical "lines" or connections. Also, the topology representation in the claimed invention can aggregate traffic from multiple users into groups of related (i.e., by network address, such as a subnet) or unrelated users. These groups can then be further aggregated into other groups, something that cannot be accomplished using the topology representation described in Fichou. Fichou describes only nodes which represents a network physical configuration and does not describe the capability of the topology

representation to include elements from the group consisting of interfaces, gateways, subnets, groups, addresses, protocols, routers or applications.

Because a claim element set forth in claims 1, 9, and 16 is not found in Fichou, either expressly or inherently, Fichou fails to anticipate claims 1, 9, or 16. As a result, the rejections of claims 1, 9, and 16 should be withdrawn.

All remaining rejected claims depend from one of claims 1, 9, or 16. Thus, the remaining rejected claims are allowable for at least the same reason as set forth with respect to claims 1; 9, and 16.

Furthermore, with respect to claim 4, the present invention recites a configuration interface for use in specifying and modifying the operating parameters and topology representation in real-time during operation. Although Fichou describes a Topology Database which includes the network physical configuration, it does not describe a configuration interface for use in modifying the Topology Database. Thus, claim 4 is not anticipated by Fichou for this further reason.

Based on the foregoing, reconsideration and withdrawal of the §102 rejection of claims 1-4, 9-11 and 16-18 is respectfully requested.

Claim Rejections under 35 U.S.C. §103(a)

Claims 5-8, 13-15 and 19-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fichou in view of U.S. Pat. No. 6,137,777 (Vaid).

As a starting point, claims 5-8, 13-15 and 19-22 are patentable over the combination of Fichou and Vaid since the Vaid reference fails to teach or suggest the features noted above that are expressly missing from Fichou In particular, Fichou and Vaid both do not teach or suggest a

system that provides a topology representation including one or more nodes that comprise a hierarchy of arbitrary physical and logical aggregation points that form a logical representation of the network. Accordingly, for this reason alone the rejection of claims 5-8, 13-15 and 19-22 is not proper and must be withdrawn.

Regarding claim 5, the combination of Vaid and Fichou fails to render this claim obvious since the topology representation of Fichou does not provide for statistics to be recorded on the basis of any physical or logical entity in the system, but rather only exchanges TDU information on a per line basis. This deficiency in the teachings of Fichou is not remedied by Vaid.

Regarding claims 6, 12 and 19, the claimed topology design is such that the inbound and outbound consumption can be combined to allow for control of total consumption. This feature is not present in Vaid of Fichou. In fact, Vaid appears to lack the concept of a topology representation completely.

Regarding claims 7, 13 and 20, while it is acknowledged that Vaid mentions independent rate conditions, the failure of Vaid to include a topology representation results in a different, more limited form of bandwidth control. The inbound and outbound rates are only controlled for individual entities, not for the entire inbound and outbound network traffic, and not in a hierarchical fashion. Thus the combination of Vaid with Fichou does not render claims 7, 13 and 20 obvious.

Turning now to claims 8, 15 and 22, these claims are patentable over the combination of Vaid and Fichou. Vaid refers to the use of priorities for resolving congestion. However, Vaid but does not maintain a topology representation which can be used to the congested/non-congested state of all network entities. Contrary to the claimed invention, Vaid is unable to configure a congested rate which is used as an estimate of available bandwidth. The lack of this

feature in combination with the lack of topology representation renders the combination of Vaid and Fichou deficient in the rejection of these claims.

Lastly, referring to claims 14 and 21, Vaid does not provide for grouping classes within classes, and combining bandwidth limits based on these groupings, which is a recited feature of these claims.

Accordingly, based on the arguments presented above, it is respectfully submitted that claims 5-8, 13-15 and 19-22 are note obvious over Fichou in view of Vaid. Reconsideration and withdrawal of the rejection of these claims is respectfully requested.

CONCLUSION

Based upon the foregoing remarks, the claims are believed to be in condition for allowance. An early notice of allowance is respectfully solicited. If the Examiner believes, however, that direct communication would advance prosecution, the Examiner is invited to telephone the undersigned

Respectfully submitted,

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